

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: M. Dahlbäck *et al.*

Application No.: 09/857,606

Group Art Unit: 1742

Filed: August 2, 2001

Examiner: H. Wilkins, III

For: ZIRCONIUM BASED ALLOY AND COMPONENT IN A NUCLEAR ENERGY PLANT

**DECLARATION OF MAGNUS LIMBÄCK UNDER 37 CFR 1.132**

I, Magnus Limbäck, M.Sc. in Engineering Physics, employed at Westinghouse Electric Sweden AB and there previously responsible for BWR fuel material, and presently employed as customer first leader, operations development, make the following declaration concerning the above-referenced patent application.

As previously stated in my declaration dated 29 March 2006 and filed in this application, today two types of multi-layer claddings are used commercially in nuclear fuel. The two claddings are developed to improve the performance in different aspects. A thin inner layer, a liner, is used to improve the resistance against Pellet-Cladding Interaction (PCI) failures, while a thin outer layer, so called Duplex tubing, is used to improve the corrosion resistance of the outer surface. In both cases, i.e., both for liner (inner layer) and Duplex (outer layer) claddings, the thin layer is normally about 10% of the wall thickness.

The above-referenced patent application contains the following statements on page 9, lines 4-13:

When the component, such as here, is a cladding tube, preferably a layer with a lower total content of alloying elements than the remaining alloy is applied on the inner circumference of the cladding tube. The total content of alloying materials in this layer is preferably below 0.5 percentage by weight, wherein the remaining part constitutes Zr. This layer makes the cladding tube more resistant to mechanical influence from the reactor fuel which is arranged in the tube and which physically may rest against and cause tensions in the walls of the cladding tube.

A person having experience in the field of nuclear fuel, when reading the language quoted above, would understand that the inner layer discussed there makes up a small percentage of the entire tube and that the alloy, which in the quoted passage is referred to as "the remaining alloy", refers to a large percentage of the entire tube. Furthermore, a person having experience in the field of nuclear fuel, when reading the language of the pending claims 13, 35, 38 and 41 in view of the description would understand that the alloy defined in these claims constitutes the whole tube or at least a large percentage of the entire tube.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully Submitted,

Dated: May 24, 2007



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Magnus Limbäck